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PTO/SB/05 (03-01)  
Approved for use through 10/31/2002. OMB 0651-0032  
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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<b>UTILITY PATENT APPLICATION TRANSMITTAL</b> <small>(Only for new nonprovisional applications under 37 CFR 1.53(b))</small>	Attorney Docket No.	50829-1040
	First Inventor	Kent, Adrian Patrick
	Title	IMPROVEMENTS RELATING TO QUANTUM CRYPTOGRAPHY
	Express Mail Label No.	EV 269333961 US

<b>APPLICATION ELEMENTS</b> <small>See MPEP Chapter 600 concerning utility patent application contents</small>	<b>ADDRESS TO:</b> Mail Stop Patent Application Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450
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<input type="checkbox"/> <b>APPLICANT REQUESTS EARLY PUBLICATION UNDER 37 CFR 1.219 (additional fee)</b>	
1. <input checked="" type="checkbox"/> <b>Fee Transmittal Form (e.g., PTO/SB/17)</b> <small>(Submit an original, and a duplicate for fee processing)</small>	7. <input type="checkbox"/> <b>CD-ROM or CD-R in duplicate, large table or Computer Program (Appendix)</b>
2. <input type="checkbox"/> <b>Applicant claims small entity status. See CFR 1.27</b>	8. <b>Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary)</b>
3. <input checked="" type="checkbox"/> <b>Specification (preferred arrangement set forth below)</b> [Total Pages <b>34</b> ]	a. <input type="checkbox"/> <b>Computer Readable Copy (CRF)</b>
<ul style="list-style-type: none"><li>- Descriptive title of the invention</li><li>- Cross Reference to Related Applications</li><li>- Statement Regarding Fed. Sponsored R&amp;D</li><li>- Reference to sequence listing, a table, or a computer program listing appendix</li><li>- Background of the Invention</li><li>- Brief Summary of the Invention</li><li>- Brief Description of the Drawings (if filed)</li><li>- Detailed Description</li><li>- Claim(s)</li><li>- Abstract of the Disclosure</li></ul>	b. <b>Specification Sequence Listing on:</b> i. <input type="checkbox"/> <b>CD-ROM or CD-R (2 copies); or</b> ii. <input type="checkbox"/> <b>Paper</b>
4. <input checked="" type="checkbox"/> <b>Drawing(s) (35 USC 113)</b> [Total Sheets <b>8</b> ]	c. <input type="checkbox"/> <b>Statements verifying identity of above copies</b>
5. <b>Oath or Declaration</b> [Total Pages <input type="checkbox"/> ]	
a. <input type="checkbox"/> <b>Newly Executed (original or copy)</b>	
b. <input type="checkbox"/> <b>Copy from a prior application (37 CFR §1.63(d)) (for continuation/divisional with Box 18 completed)</b>	
i. <input type="checkbox"/> <b>DELETION OF INVENTOR(S)</b> <b>Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).</b>	
6. <input type="checkbox"/> <b>Application Data Sheet. See 37 CFR 1.76</b>  <b>Assignee Name and Address (if applicable)</b>	

<b>ACCOMPANYING APPLICATION PARTS</b>	
9. <input type="checkbox"/> <b>Assignment Papers (cover sheet &amp; Documents(s))</b>	
10. <input type="checkbox"/> <b>37 CFR 3.73(b) Statement (when there is an assignee)</b>	<input type="checkbox"/> <b>Power of Attorney</b>
11. <input type="checkbox"/> <b>English Translation Document (if applicable)</b>	
12. <input type="checkbox"/> <b>Information Disclosure Statement (IDS)/PTO-1449</b>	<input type="checkbox"/> <b>Copies of IDS Citations</b>
13. <input type="checkbox"/> <b>Preliminary Amendment</b>	
14. <input checked="" type="checkbox"/> <b>Return Receipt Postcard (MPEP 503) (Should be specifically itemized)</b>	
15. <input type="checkbox"/> <b>Certified Copy of Priority Document(s) (if foreign priority is claimed)</b>	
16. <input type="checkbox"/> <b>Nonpublication Request under 35 U.S.C. 122(b)(2)(B)(i). Applicant must attach form PTO/SB/35 or its equivalent.</b>	
17. <input checked="" type="checkbox"/> <b>Other: Unsigned declaration of:</b>  <b>A. Kent, W. Munro, T. Spiller, and R. Beausoleil</b>	

**18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment, or in an Application Data Sheet under 37 CFR 1.76:**

☐ **Continuation** ☐ **Divisional** ☐ **Continuation-in-part (CIP)** of prior application No: ☐

**Prior application information: Examiner**

**Group / Art Unit:**

For CONTINUATION OR DIVISIONAL APPS only: the entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. This incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

<b>18. CORRESPONDENCE ADDRESS</b>			
<input checked="" type="checkbox"/> <b>Customer Number or Bar Code Label</b>	<b>24504</b>	<input type="checkbox"/> <b>Correspondence address below</b>	
<small>(Insert Customer No. or Attach bar code label here)</small>			
NAME	Thomas, Kayden, Horstemeyer & Risley, L.L.P.		
ADDRESS	100 Galleria Parkway Suite 1750		
CITY	Atlanta	STATE	Georgia
COUNTRY	U.S.A.	TELEPHONE	770-933-9500
		ZIP CODE	30339-5948
		FAX	770-951-0933
Name (Print/Type)	George M. Thomas	Registration No. (Attorney/Agent)	22,260
Signature	<i>George M. Thomas</i>	Date	7/25/03

**Burden Hour Statement:** This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

# FEE TRANSMITTAL for FY 2003

Effective 01/01/2003. Patent fees are subject to annual revisions.

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$)**1356.00**

## Complete If Known

Application Number	Unassigned
Filing Date	Herewith
First Named Inventor	Kent, Adrian
Examiner Name	Unassigned
Group / Art Unit	Unassigned
Attorney Docket No.	50829-1040

## METHOD OF PAYMENT (check all that apply)

☐ Check ☒ Credit Card ☐ Money Order ☐ Other ☐ None

☐ Deposit Account

Deposit Account Number

**20-0778**

Deposit Account Name

**Thomas, Kayden, Horstemeyer Risley, L.L.P.**

The Commissioner is authorized to: (check all that apply)

☐ Charge fee(s) indicated below ☒ Credit any overpayments  
☒ Charge any additional fee(s) during the pendency of this application  
☐ Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account

## FEE CALCULATION

### 1. BASIC FILING FEE

Large Entity Fee Code	Fee (\$)	Small Entity Fee Code	Fee (\$)	Fee Description	Fee Paid
1001	750	2001	375	Utility Filing Fee	750
1002	330	2002	165	Design Filing Fee	
1003	520	2003	260	Plant Filing Fee	
1004	750	2004	375	Reissue Filing Fee	
1005	160	2005	80	Provisional Filing Fee	

SUBTOTAL (1) (\$)**750**

### 2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

	Extra Claims	Fee From Below	Fee Paid
Total Claims	49	- 20** = 29	X 18.00 = 522
Independent Claims	4	- 3** = 1	X 84.00 = 84
Multiple Dependent			140.00 = 0

Large Entity Fee Code	Fee (\$)	Small Entity Fee Code	Fee (\$)	Fee Description
1202	18	2202	9	Claims in excess of 20
1201	84	2201	42	Independent claims in excess of 3
1203	280	2203	140	Multiple dependent claim, if not paid
1204	84	2204	42	**Reissue independent claims over original patent
1205	18	2205	9	**Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) (\$)**606**

\*\*or number previously paid, if greater; For Reissues, see above

## FEES CALCULATION (continued)

### 3. ADDITIONAL FEES

Large Entity Fee Code	Fee (\$)	Small Entity Fee Code	Fee (\$)	Fee Description	Fee Paid
1051	130	2051	65	Surcharge-late filing fee or oath	
1052	50	2052	25	Surcharge-late provisional filing fee or cover sheet	
1053	130	1053	130	Non-English specification	
1812	2,520	1812	2,520	For filing a request for ex parte reexamination	
1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action	
1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action	
1251	110	2251	55	Extension for reply within first month	
1252	410	2252	205	Extension for reply within second month	
1253	930	2253	465	Extension for reply within third month	
1254	1,450	2254	725	Extension for reply within fourth month	
1255	1,970	2255	985	Extension for reply within fifth month	
1401	320	2401	160	Notice of Appeal	
1402	320	2402	160	Filing a brief in support of an appeal	
1403	280	2403	140	Request for oral hearing	
1451	1,510	1451	1,510	Petition to institute a public use proceeding	
1452	110	2452	55	Petition to revive-unavoidable	
1453	1,300	2453	650	Petition to revive-unintentional	
1501	1,300	2501	650	Utility issue fee (or reissue)	
1502	470	2502	235	Design issue fee	
1503	630	2503	315	Plant issue fee	
1460	130	1460	130	Petitions to the Commissioner	
1807	50	1807	50	Processing fee for provisional application	
1806	180	1806	180	Submission of Information Disclosure Stmt	
8021	40	8021	40	Recording each patent assignment per property (times number of properties)	
1809	750	2809	375	Filing a submission after final rejection (37 CFR § 1.129(a))	
1810	750	2810	375	For each add. invention to be examined (37 CFR 1.129(b))	
1801	750	2801	375	Request for Continued Examination (RCE)	
1802	900	1802	900	Request for expedited exam. of a design application	
Other fee (specify)					
SUBTOTAL (3) (\$) <b>0</b>					

\*Reduced by Basic Filing Fee Paid

## SUBMITTED BY

Typed or Printed Name  
Signature

**George M. Thomas**

Registration No. **22,260**

Telephone Number

**770-933-9500**

Date

**7/25/03**

WARNING: Information on this form may become public. Credit Card information should not be included on this form. Provide credit card information and authorization on PTO-2038

This collection of information is required by 37 CFR 1.17 and 1.27. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 37 USC 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: **Adrian Patrick Kent, et al.**

For: **Improvements Relating to Quantum Cryptography**

**CERTIFICATE OF EXPRESS MAIL**

Mail Stop Patent Application  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

Sir:

Enclosed for filing in the above case are the following documents:

Return Postcard  
Utility Patent Application Transmittal Page  
Fee Transmittal Page  
Utility Patent Application Consisting Of:  
25 Pages of Specification  
8 Pages of Claims (Claims 1-49)  
1 Page of Abstract  
8 Pages of Formal Drawings (Figs. 1-9)  
Unsigned Declaration of: Adrian Patrick Kent, William John Munro,  
Timothy Paul Spiller, and Raymond G. Neausoleil (2 pages)  
Credit Card Authorizatio - authorizing filing fee of: 1356.00

Further, the Commissioner is authorized to charge Deposit Account No. 20-0778 for any additional fees required. The Commissioner is requested to credit any excess fee paid to Deposit Account No. 20-0778.

Respectfully submitted,

George M. Thomas, Reg. No. 22,260



**THOMAS, KAYDEN, HORSTEMEYER  
& RISLEY, L.L.P.**

100 Galleria Parkway, N.W.  
Suite 1750  
Atlanta, Georgia 30339-5948

Our Docket No: **50829-1040**

I hereby certify that all correspondence listed above are being deposited for delivery to the above addressee, with the United States Postal Service "**EXPRESS MAIL POST OFFICE TO ADDRESSEE**" service under 37 CFR §1.10 on the date indicated below:

The envelope has been given U.S. Postal Service "Express Mail Post Office To Addressee" Package # **EV 269333961 US**.

Date:

7-25-03



Theresa M. James